

PATENT COOPERATION TREATY

CORRECTED VERSION PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2005/050727

International filing date (day/month/year)
18.02.2005

Priority date (day/month/year)
04.03.2004

International Patent Classification (IPC) or both national classification and IPC
G06K7/00

Applicant
DIONE LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/050727

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 13-30

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 13-30
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2005/050727

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-12 and 24 in so far as claim 2 is concerned

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-12,24 in so far as claim 2 is concerned
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12,24 in so far as claim 2 is concerned
Industrial applicability (IA)	Yes: Claims	1-12,24 in so far as claim 2 is concerned
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item IV.

The separate inventions/groups of inventions are:

Claims 1-12 and 24 in so far as claim 2 is concerned:

Apparatus comprising a wall with an aperture in it, wherein at least a tamper detection conductor path is embedded in said wall around the aperture.

Claims 13-17 and 19 in so far as claim 16 is concerned:

Apparatus comprising a housing member and an enclosure fixed in the housing member by a potting material.

Claims 18 and 19 in so far as claim 18 is concerned and 29,30 in so far as claim 18 is concerned:

Apparatus comprising a first and a second housing shell and a keypad membrane, wherein a wall is provided in the first or second shell.

Claims 20-23 and 24 in so far as claim 20 is concerned:

Chip card contact module comprising a plurality of conductors leading from respective contacts.

Claims 25-28 and 29,30 in so far as claim 28 is concerned:

Keypad comprising a flexible membrane overlying a circuit board.

They are not so linked as to form a single general inventive concept (Rule 13.1 PCT) for the following reasons:

The document D1 (DE-U-9105960, cf. page 1, line 11 - page 3, line 30 and Figures) being regarded as being the closest prior art, discloses (the references in parenthesis applying to this document):

An apparatus comprising a wall, wherein at least a tamper detection conductor path is embedded in said wall for detection of intrusion into the wall.

1. The special technical features (STF) according to Rule 13.2 (PCT) defined in the

group of claims 1-12 and 24, in so far as claim 2 is concerned, (1st invention) with respect to the prior art document D1, are:

- claim 1: the wall having an aperture in it, the conductor path being embedded in said wall around the aperture for detection of widening of the aperture.

The objectively determined problem to be solved by these special technical features can be seen as electrically avoiding the risk of an attack involving the enlargement of the aperture to allow data extraction devices to be attached thereto.

2. The special technical features (STF) according to Rule 13.2 (PCT) defined in the group of claims 13-17 and 19, in so far as claim 16 is concerned, (2nd invention) with respect to the prior art document D1, are:

- claim 13: an enclosure which is fixed in the housing member by a potting material, wherein the enclosure includes holes into which the potting material extends.

The objectively determined problem to be solved by these special technical features can be seen as mechanically reducing the risk of intrusion by locking the enclosure.

3. The special technical features (STF) according to Rule 13.2 (PCT) defined in the group of claims 18 and 19, in so far as claim 18 is concerned and 29,30, in so far as claim 18 is concerned, (3rd invention) with respect to the prior art document D1, are:

- claim 18: a keypad membrane and a wall which is provided to form a barrier between a seam and the membrane.

The objectively determined problem to be solved by these special technical features can be seen as how to reduce the risk of intrusion via the keypad membrane.

4. The special technical features (STF) according to Rule 13.2 (PCT) defined in the group of claims 20-23 and 24, in so far as claim 20 is concerned, (4th invention) with respect to the prior art document D1, are:

- claim 20: Chip card module wherein none of the conductor paths leads from a contact in a direction opposite to any other.

The objectively determined problem to be solved by these special technical features can be seen as how to reduce the risk of being able to tamper the electrical connections after intrusion into the module.

5. The special technical features (STF) according to Rule 13.2 (PCT) defined in the group of claims 25-28 and 29,30, in so far as claim 28 is concerned, (5th invention) with respect to the prior art document D1, are:

- claim 25: a keypad comprising a flexible membrane having conductive elements so as to form push to make switches.

The objectively determined problem to be solved by these special technical features can be seen as how to reduce the risk of intrusion via the keypad membrane in an alternative manner.

The above analysis shows that the STF's of the five subjects are not the same. A comparison of the objective problems related to the different subjects all seen in the light of the description and drawings of the application, shows that they are all different and have no corresponding technical effects. Consequently, the STF's of the different subjects do not correspond, and the requirements of unity of invention (Rule 13.1 and 13.2 PCT) are not fulfilled.

Re Item V.

- 1 Reference is made to the following document:
D1 : DE 91 05 960 U1 (SIEMENS NIXDORF INFORMATIONSSYSTEME AG, 4790
PADERBORN, DE) 11 June 1992 (1992-06-11)
- 2 Article 6 PCT

- 2.1 It is clear from the description on page 1, lines 4-21 and the Figures, that the following feature is essential to the definition of the invention:

(1) the apparatus as claimed in claim 1 being a chip card reader.

Since independent claim 1 does not contain this feature it does not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

3. Furthermore, the above-mentioned lack of conciseness notwithstanding, the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT, and therefore the criteria of Article 33(1) PCT are not met.

- 3.1 Document D1 (DE-U-9105960, cf. page 1, line 11 - page 3, line 30 and Figures) being regarded as being the closest prior art, discloses (the references in parenthesis applying to this document):

An apparatus comprising a wall, wherein at least a tamper detection conductor path is embedded in said wall for detection of intrusion into the wall.

- 3.2 The subject-matter of independent claim 1 differs from the disclosure of D1 in that: the wall has an aperture in it, the conductor path being embedded in said wall around the aperture for detection of widening of the aperture.

- 3.3 The alleged problem to be solved by the invention can be seen as electrically avoiding the risk of an attack involving the enlargement of the aperture to allow data extraction devices to be attached thereto. However, protecting a specific part of the apparatus which is the most liable to tampering by embedding a tamper detection conductor path around this specific part, can not be considered to be inventive, since it would be obvious for the person skilled in the art to use the teachings of D1, wherein conductor paths are used throughout the whole outside periphery of the apparatus, for a specific part (aperture) only if only a specific part (aperture) needed to be protected.

4 DEPENDENT CLAIMS 2-12 and 24, in so far as claim 2 is concerned.

Also the dependent claims 2-12 and 24, in so far as claim 2 is concerned, do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), since all the claimed features would clearly be near at hand for the person skilled in the art for solving the problems posed.

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